International Journal of Reproduction. Contraception. Obstetrics and Gynecology
Sharma S et al. Int J Reprod Contracept Obstet Gynecol. 2025 Apr;14(4):1229-1234
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20250867

Original Research Article

Comparison of postoperative recovery in women undergoing open abdominal hysterectomies for benign conditions observing conventional protocol versus early recovery after surgery protocol

Surabhi Sharma[1]*, Ravikant Bhardwaj[2]

[1]Department of Obstetrics and Gynaecology, KNH, IGMC, Shimla, Himachal Pradesh, India
[2]Department of Surgery, IGMC, Shimla, Himachal Pradesh, India

Received: 03 February 2025
Accepted: 04 March 2025

***Correspondence:**
Dr. Surabhi Sharma,
E-mail: surbhi13103@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Benign gynaecological conditions are a significant health burden, especially in India, where hysterectomy is one of the most common surgical procedures. Despite advances in minimally invasive techniques, open abdominal hysterectomy remains prevalent. Enhanced recovery after surgery (ERAS) protocols, initially developed for gastrointestinal surgeries, have shown promising results in improving postoperative outcomes. However, their effectiveness in open abdominal hysterectomies for benign conditions is not well-documented. This study aims to compare the postoperative recovery outcomes in women undergoing open abdominal hysterectomies for benign conditions, following either the conventional protocol or the ERAS protocol.
Methods: A prospective cohort study was conducted from June 2023 to May 2024 at Kamla Nehru State Hospital for Mother and Child, Shimla. Fifty women undergoing open abdominal hysterectomy for benign conditions were recruited and divided into two groups: ERAS (n=25) and conventional protocol (n=25). Key outcomes measured included hospital stay duration, time to resumption of oral intake and ambulation, postoperative pain, complications, and patient satisfaction.
Results: The ERAS group demonstrated significantly shorter hospital stays (mean 5 days versus 8 days; $p<0.001$), faster return to oral intake (mean 6 hours versus 22 hours; $p<0.001$), and earlier ambulation (100% within 6-10 hours versus 0% in the conventional group; $p<0.001$). Postoperative complications, including nausea, vomiting, and constipation, were significantly lower in the ERAS group ($p<0.05$). Additionally, 56% of ERAS patients resumed normal activities within three weeks, compared to 32% in the conventional group. Patient satisfaction was also notably higher in the ERAS group.
Conclusions: The ERAS protocol significantly enhances postoperative recovery in women undergoing open abdominal hysterectomy for benign conditions. It leads to shorter hospital stays, faster recovery, and higher patient satisfaction compared to conventional protocols. These findings support the broader adoption of ERAS in gynaecological surgeries.

Keywords: Hysterectomy, ERAS, Postoperative recovery, Benign gynaecological conditions, Hospital stay, Patient satisfaction, Complications

INTRODUCTION

Benign gynaecological conditions contribute significantly to the global burden of women's health issues, posing particular challenges in India, where these conditions are among the most common health problems affecting women. Hysterectomy, the surgical removal of the uterus, ranks as one of the most frequently performed major gynaecological surgeries worldwide, second only to caesarean section.[1] Despite advancements in less invasive techniques like laparoscopic or vaginal hysterectomy, abdominal hysterectomy remains the most common

approach, with over 50% of these procedures performed via laparotomy.[2]

The majority of hysterectomies over 70% are performed for benign reasons, including menorrhagia, fibroids, pelvic pain, and uterine prolapse. Traditionally, hysterectomies were conducted either abdominally or vaginally, but there is an increasing trend toward utilizing minimally invasive techniques.[3] These modern approaches offer several benefits, such as reduced postoperative pain, faster recovery times, and improved short-term quality of life. Additionally, they contribute to shorter hospital stays and lower healthcare costs. The implementation of enhanced recovery after surgery (ERAS) protocols can further enhance these outcomes, even in open abdominal hysterectomies.[4]

ERAS, originally known as the "multi-modal approach" and later termed "fast track surgery," was pioneered by Professor Henrik Kehlet in the 1990s. This evidence-based program is designed to accelerate recovery following major surgery, with the dual goals of enhancing patient experience and clinical outcomes while reducing the demand for inpatient beds.[5] The ERAS program, also referred to as the "enhanced recovery protocol" (ERP), has gained global recognition for its success in improving surgical outcomes and lowering healthcare costs. The ERAS guidelines are continually updated to reflect the latest and best available evidence.[6]

ERAS protocols represent comprehensive perioperative care strategies that employ a multidisciplinary approach. These protocols integrate evidence-based interventions aimed at reducing surgical stress, preserving postoperative physiological function, and expediting recovery in patients undergoing major surgery. Key components of ERAS protocols include preoperative counselling, avoiding prolonged fasting, optimizing fluid management, minimizing the use of tubes and drains, employing opioid-sparing pain relief techniques, and promoting early mobilization.[7]

Traditional surgical protocols, though still widely practiced, often result in prolonged hospital stays, increased rates of postoperative complications, and a greater reliance on opioid analgesics. This reliance on opioids can lead to more discomfort for patients and slower overall recovery. Conventional protocols typically emphasize opioid-based pain management, liberal fluid administration, delayed oral intake, and limited focus on early mobilization and nutritional support.[8]

The implementation of ERAS protocols in gastrointestinal surgeries has demonstrated significant benefits, including reduced hospital stays, less postoperative pain, improved patient satisfaction, and fewer complications. Given the success of ERAS in various surgical specialties—such as cardiothoracic, orthopaedic, and urological surgeries—there is a growing interest in applying ERAS principles to gynaecological surgeries to achieve better outcomes compared to traditional approaches.[9]

The core principles of ERAS, which aim to reduce surgical stress and maintain normal physiological function, should ideally be applied to all surgical patients. Despite the challenges of implementing these protocols, the benefits to both patients and the healthcare system are evident. To ensure successful ERAS implementation, a multidisciplinary healthcare team must be involved in the patient's care both before and after surgery.[10]

Most studies evaluating the effectiveness of ERAS compared to conventional strategies have focused on oncological and minimally invasive gynaecological surgeries.[11] However, there is limited data on the effectiveness of ERAS in open abdominal hysterectomies for benign conditions. This study intends to assess the impact of ERAS on open abdominal hysterectomies for benign conditions in a tertiary care hospital in Himachal Pradesh, filling a critical gap in the existing literature.[12]

This study aims to compare postoperative recovery outcomes in women undergoing open abdominal hysterectomies for benign conditions, using either the conventional protocol or the ERAS protocol. The study will evaluate differences in hospital stay length, postoperative pain levels, complication rates, time to return to daily activities, patient satisfaction, and quality of life. Additionally, the research will assess the need for postoperative opioid use and analyze the cost-effectiveness of the ERAS protocol compared to conventional care, providing insights into optimizing recovery strategies for these patients.

METHODS

A prospective cohort study was conducted from 01 June 2023, to 31 May 2024, at the Department of Obstetrics and Gynecology, Kamla Nehru State Hospital for Mother and Child, Indira Gandhi Medical College, Shimla.

The study focused on patients undergoing open abdominal hysterectomy for benign conditions. After ethical clearance and informed consent, 50 participants were enrolled, with 25 in each group. The sample size was calculated using a 95% confidence level, 90% power, and considering a one-day difference in hospital stay between ERAS and control groups. The study excluded women with diabetes, DVT, psychiatric conditions, or BMI >40.

Statistical analysis

After data collection, the collected data was entered in Microsoft Excel Office-2019.

RESULTS

In the ERAS group, 96% of women were aged 41-60, compared to 100% in the conventional group, showing

similar age distributions (p=0.477). Hospital stays were shorter in the ERAS group, with 48% staying 2-5 days, while no one in the conventional group stayed less than 5 days (mean stays: 5 versus 8 days, p<0.001). Post-operative stays were also shorter in the ERAS group (mean: 3 versus 5 days, p<0.001). All ERAS patients started oral diets within 6-8 hours, whereas the conventional group began much later (mean: 6 versus 22 hours, p<0.001). The ERAS protocol significantly improved recovery times.

Table 1: Resumption of normal activity (weeks).

Weeks	ERAS group		Conventional group	
	N	%	N	%
1	0	0.00	0	0.00
2	8	32.00	2	08.00
3	14	56.00	8	32.00
4	3	12.00	10	40.00
>4	0	0.00	5	20.00
Total	25	100.00	25	100.00

In the ERAS group, 56% of patients (n=14) resumed normal activities within three weeks of discharge, with 32% (n=8) doing so within two weeks, and 12% (n=4) taking four weeks. In contrast, in the conventional group, 40% of patients (n=10) required four weeks to resume normal activities, 32% (n=8) took three weeks, and 20% (n=4) needed more than four weeks. Only 8% (n=2) of patients in the conventional group could resume normal activities within two weeks. The ERAS protocol facilitated a quicker return to normal activities post-discharge.

Table 2: Re-admissions.

Re-admission	ERAS group		Conventional group	
	N	%	n	%
No	25	100.00	21	84.00
Yes	0	0.00	4	16.00
Total	25	100.00	25	100.00

There were no readmissions in ERAS group whereas 16% (n=4) patients required re-admissions in conventional group**.**

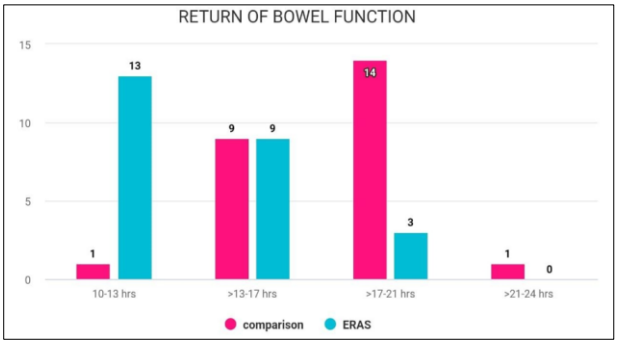

Figure 1: Time for return of bowel function in post-operative period.

In the study group, the return of bowel function, as indicated by the passage of flatus or stool, occurred within 10-13 hours in 13 patients (52%). Additionally, 9 patients (36%) experienced the return of bowel function within 13-17 hours, and 3 patients (12%) within 17-21 hours. In the conventional group, 14 patients (56%) had bowel function return within 17-21 hours, while 9 patients (36%) experienced it within 13-17 hours. Only 1 patient in the conventional group had a return of bowel function within 10-13 hours.

Table 3: Time for initiation of ambulation in the post-operative period (in hours).

Hours	ERAS group		Conventional group	
	N	%	N	%
6-10	25	100.00	0	0.00
>10-15	0	0.00	5	20.00
>15-20	0	0.00	13	52.00
>20-25	0	0.00	7	28.00
>25	0	0.00	0	00.00
Total	25	100.00	25	100.00

In the ERAS group, all patients (n=25) began ambulation within 6-10 hours post-operatively. In the conventional group, the majority of patients, 52% (n=13), started ambulation within 15-20 hours, and 28% (n=7) between 20-25 hours. Additionally, 20% (n=5) resumed ambulation between 10-15 hours, but none could ambulate within 6-10 hours, as observed in the ERAS group.

Table 4: Total duration of catheterization in the post-operative period (hours).

Hours	ERAS group		Conventional group	
	N	%	N	%
6-8	25	100.00	0	0.00
>8~18	0	0.00	0	0.00
>18-21	0	0.00	16	64.00
>21-24	0	0.00	6	24.00
>24	0	0.00	3	12.00
Total	25	100.00	25	100.00

Table 5: Duration of I/V fluid requirement in the post-operative period (in hours).

Hours	ERAS group		Conventional group	
	N	%	N	%
12-14	18	72.00	0	0.00
>14-17	7	28.00	0	0.00
>17-21	0	0.00	7	28.00
>21-24	0	0.00	8	32.00
>24	0	0.00	10	40.00
Total	25	100.00	25	100.00

In the ERAS group, all patients (n=25) were catheterized for only 6-8 hours post-operatively, with none requiring catheterization beyond this period. In contrast, in the

conventional group, 64% (n=16) of patients were catheterized for 18-21 hours, 24% (n=6) for 21-24 hours, and the remaining 12% (n=3) required catheterization for more than 24 hours.

In the ERAS group, 72% of patients (n=18) required IV fluids for 12-14 hours post-operatively, while the remaining 28% (n=7) needed IV fluids for 14-17 hours. None required fluids beyond 17 hours. In contrast, in the conventional group, 40% of patients (n=10) required IV fluids for more than 24 hours, 32% (n=8) for 21-24 hours, and 28% (n=7) for 17-21 hours post-operatively.

Table 6: Analgesic (NSAIDS) requirement in ERAS group.

Number of doses (additional NSAIDS)	N	%
0	20	80
1	2	8
2	3	12
3	0	0
Total	25	100

In the ERAS group, post-operative pain control was managed primarily with epidural analgesia. NSAIDs were administered only for breakthrough pain, using diclofenac 75 mg IM. The majority of patients, 80% (n=20), did not require any additional NSAIDs, while 20% (n=5) did. Of these, 12% (n=3) needed only a single dose, and 8% (n=2) required two additional doses.

Table 7: Pain assessment score.

Score	ERAS group		Conventional group	
	N	%	N	%
0-3 (mild)	9	36.00	0	0.00
4-6 (moderate)	16	64.00	19	76.00
7-9 (severe)	0	0.00	6	24.00
Total	25	100.00	25	100.00

In the ERAS group, 16 patients (64%) experienced moderate pain (VAS score 4-6), while 9 patients (36%) reported mild pain (VAS score 0-3). No patients in this group reported severe pain. In contrast, in the conventional group, 19 patients (76%) experienced moderate pain, and 6 patients (24%) reported severe pain (VAS score 7-9). Notably, no patients in the ERAS group had a VAS score of 0-3, indicating mild pain.

In the ERAS group, 12% (3 patients) experienced nausea/vomiting, 4% (1 patient) had a fever, and 4% (1 patient) had constipation. Notably, there were no cases of wound infection/sepsis or urinary tract infection in this group. In contrast, in the conventional group, 28% (7 patients) experienced nausea/vomiting, 16% (4 patients) had a fever, 12% (3 patients) had urinary tract infections, 12% (3 patients) had constipation, and 4% (1 patient) had wound infection/sepsis. There were no instances of respiratory tract infections or DVT in either group.

Patient satisfaction was notably higher in the ERAS group, with 52% (13 patients) rating their satisfaction at 5 (very satisfied), 40% (10 patients) giving a score of 4 (satisfied), and 8% (2 patients) reporting a score of 3 (neither satisfied nor dissatisfied). None of the patients in the ERAS group had a satisfaction score below 3. In comparison, in the conventional group, 48% (12 patients) had a satisfaction score of 3, 32% (8 patients) rated their satisfaction at 4 (somewhat satisfied), and 20% (5 patients) had a score of 2, indicating they were somewhat dissatisfied. Notably, no patients in the conventional group rated their satisfaction as very satisfied (score 5).

Table 8: Post-operative complications.

Complications	ERAS group		Conventional group	
	N	%	N	%
Nausea/vomiting	3	12.00	7	28.00
Fever	1	04.00	4	16.00
Wound infection/ sepsis	0	0.00	1	04.00
Urinary tract infection	0	0.00	3	12.00
Constipation	1	04.00	3	12.00
Respiratory tract infection	0	0.00	0	00.00
DVT	0	0.00	0	00.00

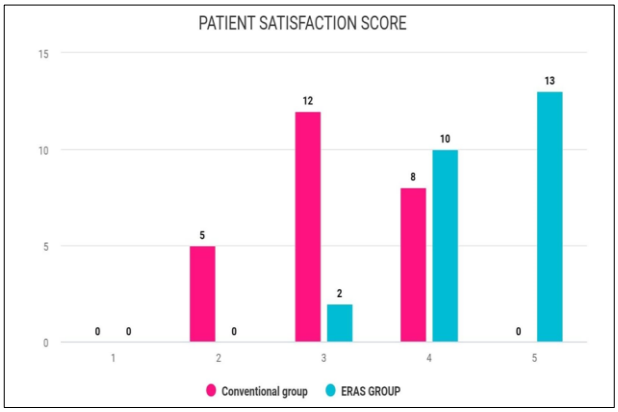

Figure 2: Patient satisfaction score.

DISCUSSION

ERAS protocols have transformed peri-operative care by emphasizing evidence-based practices to minimize surgical stress, enhance patient outcomes, and reduce hospital stays. Conversely, conventional protocols rely on traditional peri-operative strategies. This discussion aims to evaluate the comparative efficacy of ERAS versus conventional protocols in the context of open abdominal hysterectomy for benign conditions, highlighting the benefits and potential limitations of each approach.

This study included 50 patients, comparable to Eberhart et al with 46 patients and Gerardi et al with 45 patients.[13-15] In contrast, Ibrahim et al included 74 patients, ensuring the current study's sample is consistent and comparable with another research.[15] The mean age in this study (ERAS: 48.12 years, conventional: 48.96 years) aligns with Goswami et al (ERAS: 45.3, conventional: 45.6), Ibrahim et al (ERAS: 48.1, conventional: 47.2), and Kim et al (ERAS: 45.8, conventional: 43.2), demonstrating consistency in patient demographics.[15-17]

In this study, the mean hospital stay was 3 days for the ERAS group and 5 days for the conventional group, consistent with similar findings by Wijk et al, Prasad et al, and Kim et al.[17-19] The shorter stay in the ERAS group is likely due to reduced surgical stress and faster recovery facilitated by minimal fasting, early mobilization, optimized pain management, and a shorter admission-to-surgery interval.

The initiation of oral diet in the post-operative period was earlier in ERAS group as compared to conventional group. Similar results were also shown in the studies conducted by Wijk et al, Abdelrazik et al and Ibrahim et al showing the effectiveness of ERAS protocol in early initiation of diet after surgery.[15,17,20]

In the present study, time taken for return of bowel function in post-operative period was earlier in ERAS group as compared to conventional group. The difference in result was statistically significant which was similar to the study conducted by Ibrahim et al.[15] In the study conducted by Wijk et al there was no statistically significant difference between the two group.[17]

The ERAS group initiated post-operative ambulation significantly earlier than the conventional group, consistent with studies by Abdelrazik et al and Wijk et al.[17,20] Nagula et al's study showed no significant difference, likely due to limited nursing care and support staff at a non-academic institute. In this study, ERAS group patients were catheterized for 6 hours, while the conventional group averaged 21 hours. Similar findings by Wijk et al showed ERAS patients with a mean of 12 hours and conventional patients with 24 hours.[17] Early catheter removal in ERAS promotes mobility, reduces infection risk, and enhances recovery.

The ERAS protocol employs multimodal analgesia to manage pain effectively while minimizing NSAID use, resulting in reduced nausea, vomiting, faster recovery, and improved patient satisfaction. In this study, a statistically significant difference in post-operative analgesic requirements was observed between the ERAS and conventional groups, consistent with findings from Abdelrazik et al in 2020.[20] The present study found a statistically significant difference in pain scores, with the ERAS group, receiving continuous epidural analgesia, experiencing less post-operative pain. This aligns with findings by Abdelrazik et al and Ibrahim et al, highlighting the superior pain relief provided by epidurals.[15,20]

The studies conducted by Wijk et al and Ibrahim et al were statistically significant for post-operative complications when comparing the two groups.[15,17] The present study also had p value of <0.001, when post-operative complications were compared and the difference was statistically significant. It has been observed from various studies that comprehensive approach of ERAS protocol may reduce risk of complications such as infections, thromboembolic events, and reduced post-operative complications.

In the present study and the study conducted by Anton et al, ERAS group had a mean patient satisfaction score of 4 versus 3 in conventional group.[21] Higher patient satisfaction score could be because of better pain management, early initiation of oral diet, decreased length of hospital stay and quicker return to normal activity. In the present study there were no re-admissions in ERAS group as compared to 16% patients requiring re-admission in conventional group with similar findings noted in studies by Yilmaz et al and Kilpio et al, where conventional group had 14.4% and 16.6% re-admissions respectively.[22,23] It was seen that in the study by Yilmaz et al and Kilpio et al that ERAS group also had 3.3 % and 5% re-admissions respectively. Although the difference in the re-admission in ERAS versus conventional group was statistically significant.

CONCLUSION

This study found that the ERAS protocol significantly improved post-operative outcomes for patients undergoing open abdominal hysterectomy compared to conventional protocols. Patients in the ERAS group had shorter hospital stays, better pain management, and a faster return of bowel function. They also experienced fewer post-operative complications such as nausea, vomiting, and constipation, with reduced febrile morbidity. High patient satisfaction was linked to these improved outcomes, along with quicker recovery and earlier return to normal activities. The ERAS protocol's emphasis on early oral intake and ambulation further supported faster recovery and reduced complications like deep vein thrombosis. The lower re-admission rates in the ERAS group reflected better overall recovery. However, these findings, based on a small sample size, should be validated with larger studies to confirm the benefits of ERAS in open abdominal hysterectomy.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Anderson JR, Chen G, editors. Global Women's Health, An Issue of Obstetrics and Gynecology Clinics, E-Book: Global Women's Health, An Issue of Obstetrics and Gynecology Clinics, E-Book. Elsevier Health Sciences. 2022.

2. Sandberg EM, Twijnstra AR, Driessen SR, Jansen FW. Total laparoscopic hysterectomy versus vaginal hysterectomy: a systematic review and meta-analysis. J Minim Invasive Gynecol. 2017;24(2):206-17.
3. Rahman R, Gupta S, Manyonda I. Hysterectomy for benign gynaecological disease. Obstet Gynaecol Reprod Med. 2017;27(4):125-31.
4. Joshi GP. Multimodal analgesia techniques and postoperative rehabilitation. Anesth Clin North Am. 2005;23(1):185-202.
5. Xia W, Barazanchi AW, Hill AG. ERAS position in the global surgical community. Enhanced Recovery After Surgery: A Complete Guide to Optimizing Outcomes. Springer Nature. 2020;631-8.
6. Ibrahim MS, Alazzawi S, Nizam I, Haddad FS. An evidence-based review of enhanced recovery interventions in knee replacement surgery. Ann Royal Coll Surg Engl. 2013;95(6):386-9.
7. Lam JY, Howlett A, McLuckie D, Stephen LM, Else SD, Jones A, et al. Developing implementation strategies to adopt Enhanced Recovery After Surgery (ERAS®) guidelines. BJS Open. 2021;5(2):zraa011.
8. Echeverria-Villalobos M, Stoicea N, Todeschini AB, Fiorda-Diaz J, Uribe AA, Weaver T, et al. Enhanced recovery after surgery (ERAS): a perspective review of postoperative pain management under ERAS pathways and its role on opioid crisis in the United States. Clin J Pain. 2020;36(3):219-26.
9. Pędziwiatr M, Mavrikis J, Witowski J, Adamos A, Major P, Nowakowski M, et al. Current status of enhanced recovery after surgery (ERAS) protocol in gastrointestinal surgery. Med Oncol. 2018;35:1-8.
10. Scott MJ, Baldini G, Fearon KC, Feldheiser A, Feldman LS, Gan TJ, et al. Enhanced Recovery After Surgery (ERAS) for gastrointestinal surgery, part 1: pathophysiological considerations. Acta Anaesthesiol Scand. 2015;59(10):1212-31.
11. Kalogera E, Glaser GE, Kumar A, Dowdy SC, Langstraat CL. Enhanced recovery after minimally invasive gynecologic procedures with bowel surgery: a systematic review. J Minim Invasive Gynecol. 2019;26(2):288-98.
12. Kalogera E, Glaser GE, Kumar A, Dowdy SC, Langstraat CL. Enhanced recovery after minimally invasive gynecologic procedures with bowel surgery: a systematic review. J Minim Invasive Gynecol. 2019;26(2):288-98.
13. Eberhart LH, Koch T, Ploeger B, Wagner U, Wulf H, Zwiorek L, Kalder M. Enhanced recovery after major gynaecological surgery for ovarian cancer-an objective and patient-based assessment of a traditional versus a multimodal" fast track" rehabilitation programme. Anasthesiologie Intensivmedizin. 2008;49:180.
14. Gerardi MA, Santillan A, Meisner B, Zahurak ML, Montes TP, Giuntoli II RL, et al. A clinical pathway for patients undergoing primary cytoreductive surgery with rectosigmoid colectomy for advanced ovarian and primary peritoneal cancers. Gynecol Oncol. 2008;108(2):282-6.
15. Mohamed Ibrahim SM, Mahmoud El-Sheikh MA, Salama Abdelfattah AM. Effect of enhanced recovery after surgery protocol on postoperative outcomes of women undergoing abdominal hysterectomy. SAGE Open Nursing. 2023;9:23779608231165948.
16. Goswami B, Dr. Jaketiya B, Patel M, Gupta A. Comparative Study of Eras Protocol with Conventional Protocol for Gynecological Surgery. Paripex-Indian J Res. 2022;11:7.
17. Wijk L. Enhanced Recovery After Hysterectomy. Doctoral dissertation. Örebro University. 2017.
18. Nagula BP, Abhishek V. Enhanced Recovery after Surgery versus Conventional Care in Elective Laparotomy-A Prospective Interventional Study. Small. 2022;28:04.
19. Kim WJ, Noh JJ, Bang YJ, Yang MY, Kim JH, Park CH, et al. Initial experience with the enhanced recovery after surgery (ERAS) protocols in gynecologic surgery at an urban academic tertiary medical center. Gland Surg. 2024;13(1):19.
20. Abdelrazik AN, Sanad AS. Implementation of enhanced recovery after surgery in gynecological operations: a randomized controlled trial. Ain-Shams J Anesthesiol. 2020;12(1).
21. Antoun L, Smith P, Afifi Y, Cullis K, Clark TJ. Short stay laparoscopic hysterectomy: an evaluation of feasibility and patient satisfaction. Facts Views Vision Obgyn. 2021;13(4):377.
22. Yilmaz G, Akça A, Aydin N. Enhanced recovery after surgery (ERAS) versus conventional postoperative care in patients undergoing abdominal hysterectomies. Ginekologia Polska. 2018;89(7):351-6.
23. Kilpiö O, Härkki PS, Mentula MJ, Väänänen A, Pakarinen PI. Recovery after enhanced versus conventional care laparoscopic hysterectomy performed in the afternoon: a randomized controlled trial. Int J Gynecol Obstet. 2020;151(3):392-8.

Cite this article as: Sharma S, Bhardwaj R. Comparison of postoperative recovery in women undergoing open abdominal hysterectomies for benign conditions observing conventional protocol versus early recovery after surgery protocol. Int J Reprod Contracept Obstet Gynecol 2025;14:1229-34.